LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1 – 54. (Canceled).

55. (Previously presented) A method for heating a roller used in the production and/or finishing of a web of material, comprising:

generating heat at least in part inside the roller by catalytically combusting a fuel with air or oxygen at least in some regions inside the roller.

56. (Previously presented) The method in accordance with claim 55, wherein the web of material comprises one of a paper web or paperboard web,

57. (Previously presented) The method in accordance with claim 55, wherein the roller is operated in a manner of a catalytic burner.

58. (Previously presented) The method in accordance with claim 55, wherein the heat is generated at least in part on inner heat transfer surfaces of the roller coated with a catalyst.

59. (Previously presented) The method in accordance with claim 55, wherein the heat is generated at least in part in at least one space inside the roller one of filled with a catalytic carrier or equipped with a catalytic surface.

60. (Previously presented) The method in accordance with claim 55, wherein the fuel comprises a fuel gas.

61. (Previously presented) The method in accordance with claim 55, wherein the heat is generated through an exothermic reaction after a mixture of the fuel, comprising a fuel gas, and the air or oxygen is supplied in an adjustable mixture ratio.

62. (Previously presented) The method in accordance with claim 60, wherein the heat is generated through an exothermic reaction, and the method further comprises feeding a mixture of the fuel gas and the air or oxygen to peripheral bores in the roller, whereby the exothermic reaction occurs in the peripheral bores.

63. (Previously presented) The method in accordance with claim 62, further comprising feeding a heated gas from the peripheral bores via radial ducts to an annular duct filled region near a roller surface.

64. (Previously presented) The method in accordance with claim 55, further comprising feeding a mixture of the fuel and the air or oxygen to the roller via at least one rotary inlet.

65. (Previously presented) The method in accordance with claim 61, wherein the exothermic reaction occurs in a duct-filled annular region near a roller surface and the method further comprises:

feeding the fuel gas toward the duct-filled annular region through peripheral bores in the roller and radial ducts extending from the peripheral bores; and

feeding the air or oxygen to the duct-filled annular region through a central roller bore via radial ducts extending from the central roller bore.

66. (Previously presented) The method in accordance with claim 65, further comprising feeding at least one of the fuel and the air or oxygen through at least one rotary inlet.

67. (Previously presented) The method in accordance with claim 61, wherein the exothermic reaction occurs in a duct-filled annular region near a roller surface and the method further comprises:

feeding the fuel gas and the air or oxygen toward the duct-filled annular region through peripheral bores in the roller and radial ducts extending from the peripheral bores; and

discharging waste gases from the duct-filled annular region through a central roller bore via radial ducts extending from the central roller bore.

68. (Previously presented) The method in accordance with claim 55, wherein the roller comprises a plurality of heatable zones successively arranged in a direction of a roller

axis, and the method further comprises heating at least a part of one of the plurality of heatable zones independently of another of the plurality of zones.

69. (Previously presented) The method in accordance with claim 55, wherein the roller comprises a casing rotating around a non-rotatable core, and the method comprises obtaining an exothermic reaction in a region of a surface of the roller core or in a duct-filled annular region of the roller casing.

70. (Previously presented) The method in accordance with claim 69, wherein a surface of the non-rotatable core comprises duct structures and the heat is generated through an exothermic reaction occurring in a region of the duct structures on the surface of the non-rotatable core

71. (Previously presented) The method in accordance with claim 69, wherein a catalyst is coated at least in part on at least one of the surface of the non-rotatable core or the duct structures are coated with a catalyst at least in part.

72. (Previously presented) The method in accordance with claim 70, further comprising dividing the roller into independently heatable axial zones by arranging seals and several feed ducts or bores opening into the duct structures for fuel gas, air, or a mixture of fuel gas and air.

73. (Previously presented) The method in accordance with claim 55, further comprising adjusting a reaction or roller temperature by an fuel/air mass flow ratio (stoichiometry).

74. (Previously presented) The method in accordance with claim 55, wherein an overstoichiometric combustion or combustion with a surplus of oxygen occurs.

75. (Previously presented) The method in accordance with claim 55, wherein the fuel comprises hydrogen.

76. (Previously presented) The method in accordance with claim 55, wherein the fuel comprises one of a reformat or an H_2-rich gas obtained from natural gas.

77. (Previously presented) The method in accordance with claim 58, wherein the catalyst comprises at least one noble metal.

78. (Previously presented) The method in accordance with claim 77, wherein the at least one noble metal comprises at least one of platinum, palladium, or rhodium.

79. (Previously presented) The method in accordance with claim 55, further comprising controlling a fuel mass flow via a volumetric flow measurement and a corresponding control valve.

80. (Previously presented) The method in accordance with claim 55, further comprising controlling a fuel gas concentration in the air with a fuel gas sensor and a corresponding control valve.

81. (Previously presented) The method in accordance with claim 55, further comprising controlling a roller temperature with a roller temperature measurement and a corresponding control valve.

82. (Previously presented) The method in accordance with claim 68, further comprising zonally controlling at least one of fuel mass flow, fuel gas concentration in air, and roller temperature.

83. (Previously presented) A heatable roller used in the production and/or finishing of a web of material, comprising:

a heating unit comprising a catalyst arranged on an inside of the roller to combust a fuel with air or oxygen.

84. (Previously presented) The heatable roller in accordance with claim 83, wherein the web of material comprises one of a paper web or paperboard web.

85. (Previously presented) The heatable roller in accordance with claim 83, wherein the heating unit is formed as a catalytic burner.

86. (Previously presented) The heatable roller in accordance with claim 83, further comprising inner heat transfer surfaces coated with the catalyst.

87. (Previously presented) The heatable roller in accordance with claim 83, further comprising at least one space on the inside of the roller one of filled with a catalytic carrier or equipped with a catalytic surface.

88. (Previously presented) The heatable roller in accordance with claim 83, wherein the fuel comprises a fuel gas.

89. (Previously presented) The heatable roller in accordance with claim 83, further comprising an adjustable device for adjusting a mixture ratio for a supplied mixture of the fuel and the air or oxygen for an exothermic reaction.

90. (Previously presented) The heatable roller in accordance with claim 83, further comprising peripheral bores and a feed device for feeding a mixture of the fuel and the air or oxygen to the peripheral bores, wherein an exothermic reaction occurs in the bores.

91. (Previously presented) The heatable roller in accordance with claim 90, further comprising an annular region filled with ducts near a roller surface and radial ducts structured and arranged to feed heated gas from the peripheral bores to the annular region.

92. (Previously presented) The heatable roller in accordance with claim 83, further comprising at least one rotary inlet structured and arranged to feed the mixture of the fuel and the air or oxygen.

93. (Previously presented) The heatable roller in accordance with claim 83, further comprising:

peripheral bores with radial ducts extending from the peripheral bores that are structured and arranged to feed the fuel;

a central roller bore with radial ducts extending from the central roller bore that are structured and arranged to feed the air or oxygen; and

a duct-filled annular region near a roller surface in which an exothermic reaction occurs.

94. (Previously presented) The heatable roller in accordance with claim 93, further comprising at least one rotary inlet structured and arranged to feed at least one of the fuel or the air or oxygen.

95. (Previously presented) The heatable roller in accordance with claim 83, further comprising:

peripheral bores with radial ducts extending from the peripheral bores that are structured and arranged to feed a mixture of the fuel and the air or oxygen;

a central roller bore with radial ducts extending from the central roller bore that are structured and arranged to discharge waste gases; and

a duct-filled annular region near a roller surface in which an exothermic reaction occurs.

96. (Previously presented) The heatable roller in accordance with claim 83, further comprising a plurality of zone successively arranged in a direction of a roller axis, wherein the plurality of zones are at least partly heatable independently of each other.

97. (Previously presented) The heatable roller in accordance with claim 83, further comprising:

a non-rotatable core; and

a casing being rotatable around the non-rotatable core having a duct-filed annular region,

wherein the heating unit is structured and arranged so an exothermic reaction occurs in a region of a surface of the roller core or in the duct-filled annular region of the casing.

98. (Previously presented) The heatable roller in accordance with claim 97, further comprising duct structures formed on a surface of the non-rotatable core, wherein the exothermic reaction occurs in a region of the duct structures.

99. (Previously presented) The heatable roller in accordance with claim 97, further comprising the catalyst coated at least in part on at least one of the surface of the non-rotatable core or the duct structures on the non-rotatable core.

100. (Previously presented) The heatable roller in accordance with claim 97, further comprising seals and several feed ducts or bores opening into duct structures for at least

one of the fuel, the air or oxygen, or a mixture of the fuel and air or oxygen, whereby the non-rotatable core is divided into axial zones at least partly independently heatable from each other.

101. (Previously presented) The heatable roller in accordance with claim 83, further comprising a device structured and arranged to adjust a reaction or roller temperature according to a fuel/air mass flow ratio (stoichiometry).

102. (Previously presented) The heatable roller in accordance with claim 83, wherein an overstoichiometric combustion or combustion with a surplus of oxygen occurs in the heating unit.

103. (Previously presented) The heatable roller in accordance with claim 83 wherein the fuel comprises hydrogen.

104. (Previously presented) The heatable roller in accordance with claim 83, wherein the fuel comprises reformat or an H_2-rich gas obtained from natural gas.

105. (Previously presented) The heatable roller in accordance with claim 99, wherein the catalyst comprises at least one noble metal.

106. (Previously presented) The heatable roller in accordance with claim 105, wherein the noble metal comprises at least one of particular platinum, palladium, and rhodium.

107. (Previously presented) The heatable roller in accordance with claim 83, further comprising a volumetric flow measurement device and an associated control valve structured and arranged to control a fuel gas mass flow.

108. (Previously presented) The heatable roller in accordance with claim 83, further comprising a fuel gas sensor and an associated control valve structured and arranged to control a fuel gas concentration in the air.

109. (Previously presented) The heatable roller in accordance with claim 83, further comprising a device for measuring roller temperature and an associated control valve structured and arranged to control a roller temperature.

110. (Previously presented) The heatable roller in accordance with claim 97, further comprising a control arrangement to zonally control at least one of fuel mass flow, fuel gas concentration in air, and roller temperature.

111. (Previously presented) The method in accordance with claim 70, further comprising etching at least in part the duct structures on the surface of the non-rotatable core.

112. (Previously presented) The method in accordance with claim 70, further comprising milling at least in part the duct structures on the surface of the non-rotatable core.

113. (Previously presented) The method in accordance with claim 58, further comprising at least one of rinse coating, dip coating or spray coating the catalyst is produced by rinse coating, dip coating or spray coating.

114. (Previously presented) The method in accordance with claim 69, further comprising at least one of shrink-fitting and soldering the casing onto the non-rotatable core.